

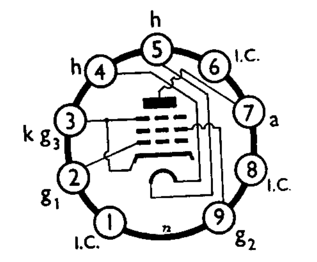
MINIATURE
OUTPUT PENTODE
0·3A INDIRECTLY HEATED

N329

MARCH, 1954

A high slope pentode suitable for use as an audio and frame time base output valve.

BASE CONNECTIONS AND VALVE DIMENSIONS



View from underside of base.

Base : B9A
Bulb : Tubular

Overall length :	78·5 max.	mm.
Seated length :	71·5 max.	mm.
Diameter :	22·2 max.	mm.

HEATER

I_h	0·3	A
V_h	16·5	V

MAXIMUM RATINGS (design centre)

V_a (b)	550	V	$V_{h\text{-}k}$	250	V
V_{g2} (b)	550	V	I_k	75	mA
V_a	250	V			
*V_a (pk) pulse	2,500	V	p_a	9	W
V_{g2}	250	V	p_{g2}	2·5	W

*Maximum pulse duration 10% of one cycle with a maximum of 2 m sec.

CHARACTERISTICS

V_a	170	V	g_m	9·0	mA/V
V_{g2}	170	V	r_a	20,000	kΩ
V_{g1}	−10·4	V			
I_a	53	mA	μ (g1-g2)	10	

CAPACITANCES (of cold valve)

$c_{g1\text{-}a}$ 1·0 pF $c_{g1\text{-all}}$ 11 pF $c_{a\text{-all}}$ 6·2 pF

TYPICAL OPERATION. Pentode Connection.
Single Valve. Class A. Audio Amplifier.

V_a	170	200	V
V_{g2}	170	200	V
V_{g1} (o)	−10·6 approx.	−14·4 (approx.)	V
v_{in} pk	8·5	9·9	V
i_a (o)	50	45·0	mA
i_{g2} (o)	9	8·5	mA
R_k	180	270	Ω
R_L	3	4	kΩ
P_{out}	4·0	4·2	W
D	10	10	%

MOUNTING Any position.

SCREENING None normally required.

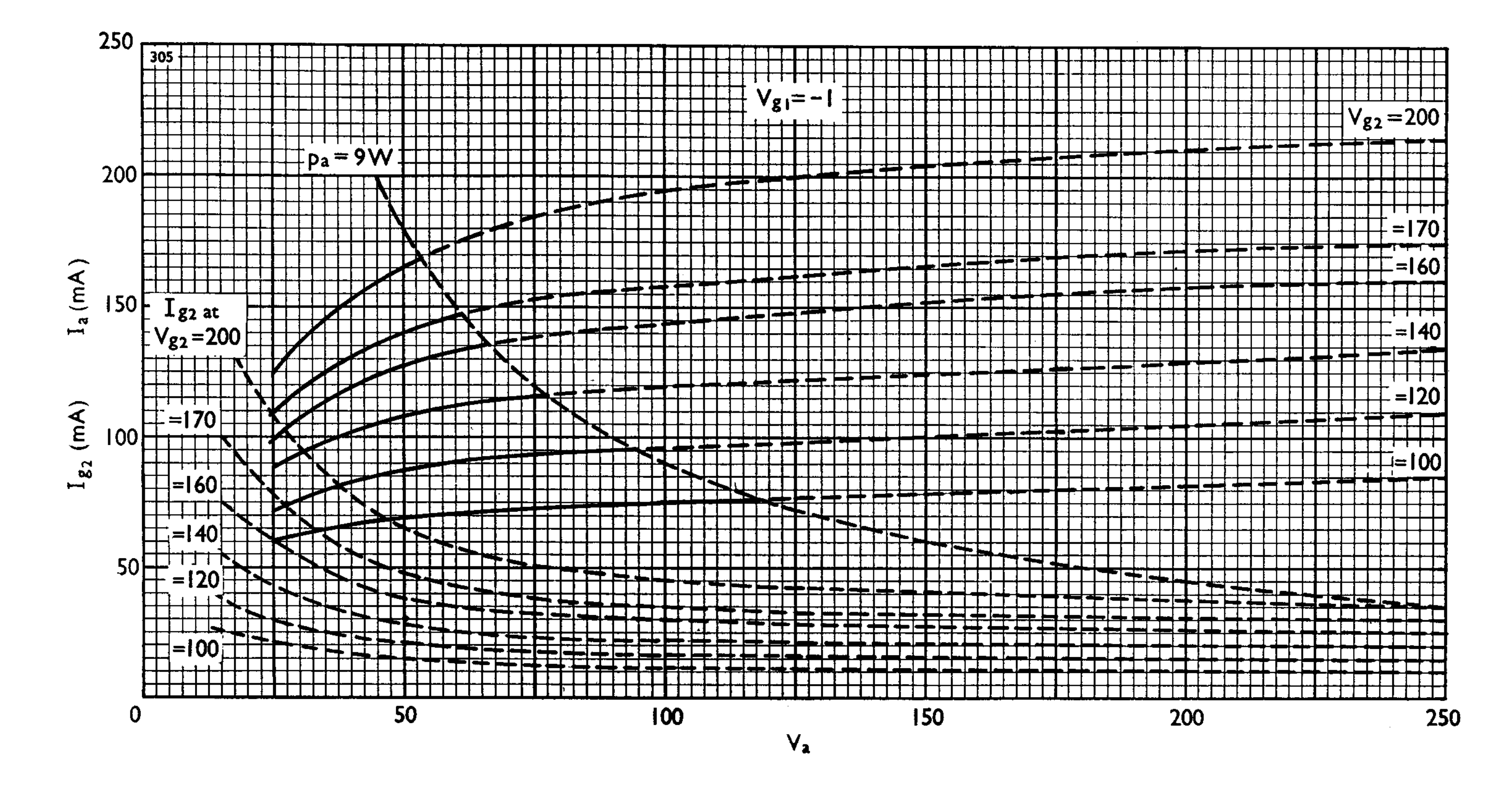
RETAINING The use of a retaining device is recommended.

VENTILATION

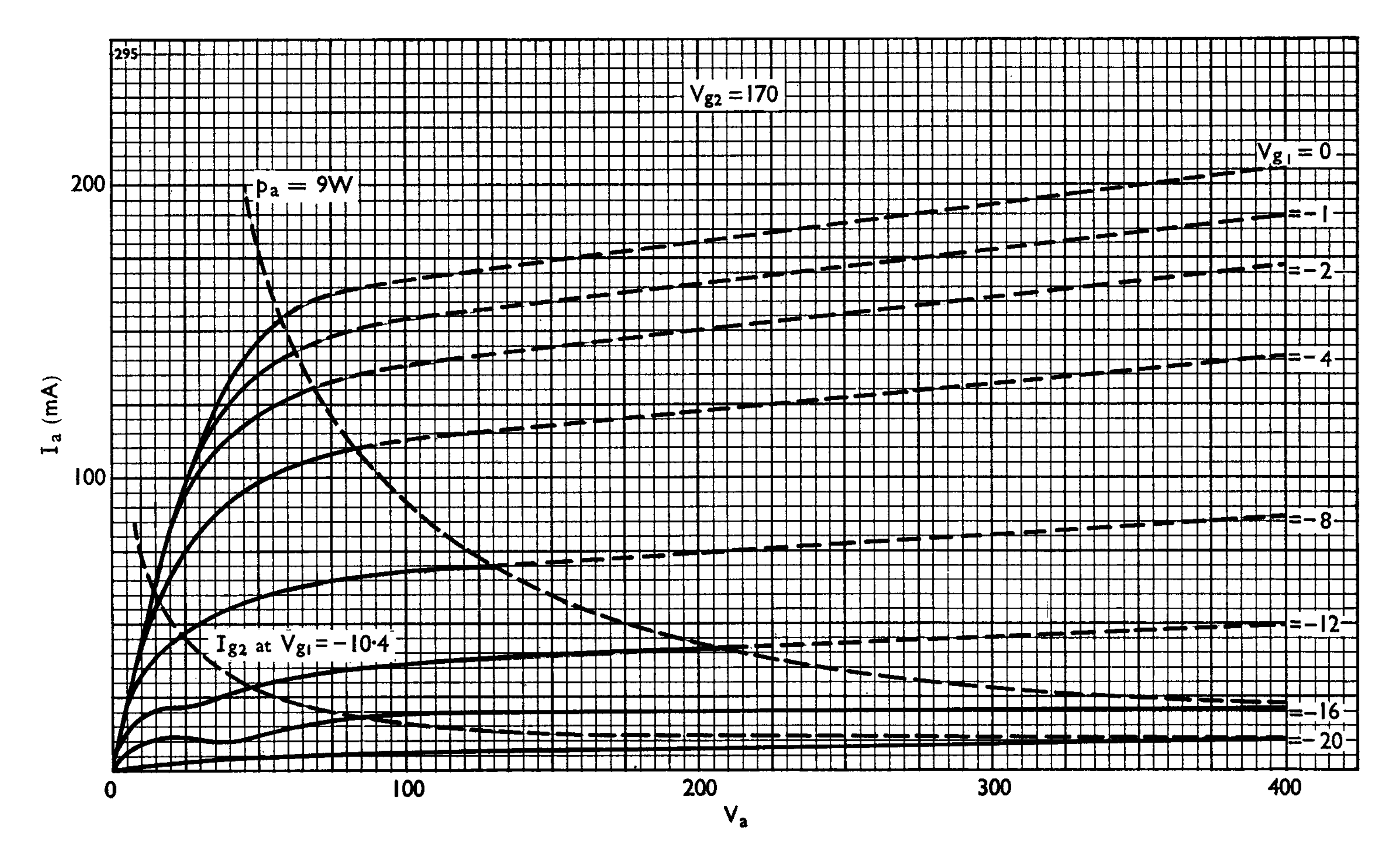
Free air circulation around the bulb is preferable. The temperature of the hottest part of the bulb must not exceed 250°C.

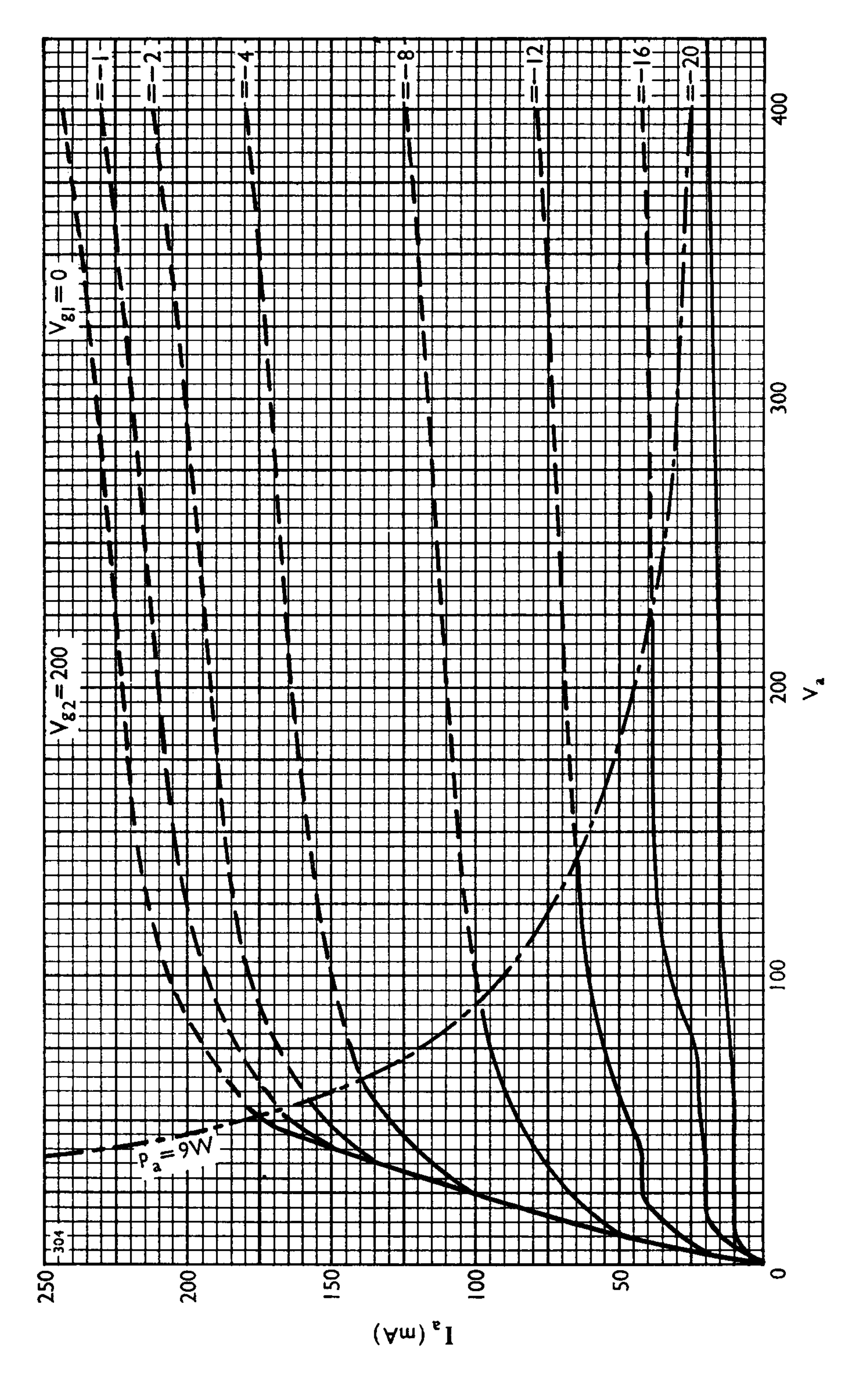
MICROPHONY

The valve is free from microphony in normal receiver application.

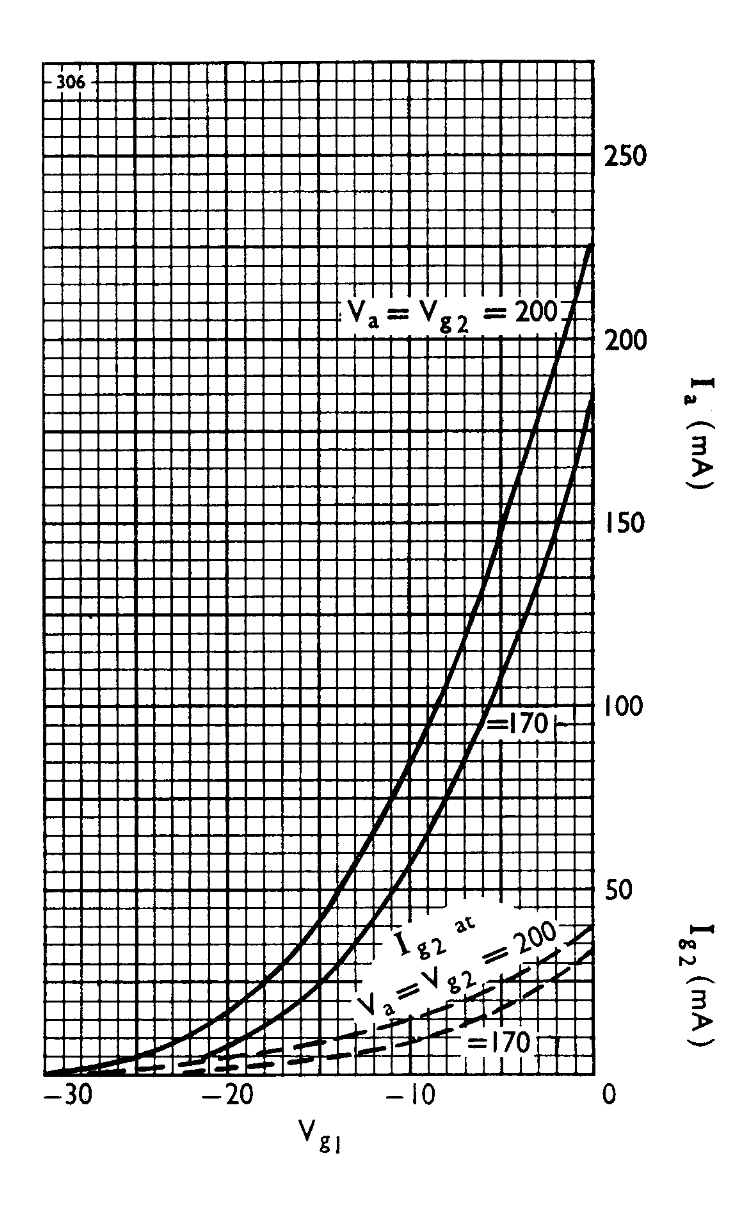


305
V_{g1} = −1
V_{g2} = 200
p_a = 9W
=170
=160
=140
=120
=100
I_{g2} at
V_{g2} = 200
=170
=160
=140
=120
=100
I_a (mA)
I_{g2} (mA)
250
200
150
100
50
0
50
100
150
200
250
V_a


295
$V_{g2} = 170$
$V_{g1} = 0$
= −1
= −2
= −4
= −8
= −12
= −16
= −20
$p_a = 9W$
I_{g2} at $V_{g1} = -10{\cdot}4$
I_a (mA)
200
100
0
100
200
300
400
V_a



$V_{g1} = 0$
−1
−2
−4
−8
−12
−16
−20
$V_{g2} = 200$
$P_a = 9W$
I_a (mA)
V_a
250
200
150
100
50
0
100
200
300
400
304


306
250
200
150
100
50
0
−30
−20
−10
$V_a = V_{g2} = 200$
=170
I_{g2} at
$V_a = V_{g2} = 200$
=170
I_a (mA)
I_{g2} (mA)
V_{g1}

N329

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